

## REMARKS

All of the Remarks of the 7 August 2009 Amendment are incorporated herein. Support for new claim 47 appears at page 6, lines 16-20 of the Specification.

The Advisory reads in pertinent part:

*Continuation of 3. NOTE: For example, claim 4 step C recites the now amended step of "optionally computationally fragmenting," wherein support for the recitation of said optional step has not been found in the instant specification. Furthermore, the step of "optionally computationally fragmenting each target nucleic acid sequence in a programmed computer" raises a vague and indefinite issue with regards to step c. It is vague and indefinite as to whether the step is optional as to where the "fragmenting" occurs, i.e. in a programmed computer or outside or whether the optional limitation refers to the "fragmenting" itself.*

Applicants perceive two concerns of the Examiner in this - the first concern is that Applicants' Specification does not teach identifying the subsequences (computationally fragmenting).

The Specification reads at page 13 lines 19-22: "A composite hash was used to store all the oligonucleotides of a specific length derived from a dataset of the prokaryotic 16S rRNA sequences and their related information."

To store the oligonucleotides, they had to be computed, and computing them is "computationally fragmenting." the parent sequence.

The Examiner's second concern is:

*"Furthermore, the step of "optionally computationally fragmenting each target nucleic acid sequence in a programmed computer" raises a vague and indefinite issue with regards to step c. It is vague and indefinite as to whether the step is optional as to where the "fragmenting" occurs, i.e. in a programmed computer or outside or whether the optional limitation refers to the "fragmenting" itself."*

The claim could be amended to read: "optionally computationally fragmenting each target nucleic acid sequence, optionally using a programmed computer". But one must surely use a computer for this.

Therefore, Claim 4 is now amended to read: "...optionally computationally fragmenting each target nucleic acid sequence, such fragmentation being performed in a programmed computer ..."

The last concern of the Examiner is the need for an RCE so that the amended claims can be entered:

*Continuation of 11. does **NOT** place the application in condition for allowance because: Applicant's arguments have been considered, but were not deemed persuasive as they address amended claims, which have not been entered. However, with regards to the rejection of claims under 35 USC 101, if applicant's amendments were entered appear to overcome said rejection.*

The Examiner is thanked for helpfully noting that the entry of the claims would overcome the rejection under 35 USC 101. It is urged that both the 7 August 2009 and the present Amendment now can properly be entered in response to the attached Request for Continued Examination Form PTO/SB/30.

Regarding the optional step in Claim 4, the Specification on page 6 lines 16-20 reads:

"It is preferable and computationally efficient to only calculate the Qs value for test sequences of length N that occur at least twice in the database. Those test sequences that never occur are not signature sequences. Test sequences that occur once are perfect signature sequences of the particular organism or virus from which the nucleic acid was formed"

So Applicants add a new dependent Claim 47 which specifies the optional step:

47. A method of claim 4 wherein all subsequences of length 7 or longer that

occur in less than two sequences in the nucleic acid database are not considered when creating a database of characteristic signature sequences.

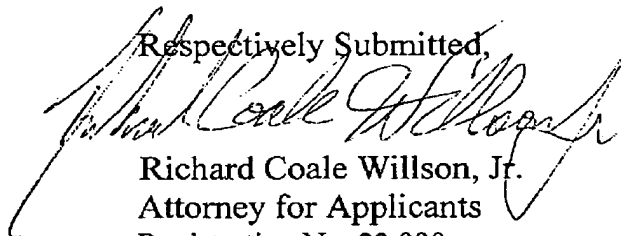
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The Amendments herein are merely clarifying wording and no estoppel or new matter is involved; they are not required to distinguish from prior art.

The dependent claim fee for Claim 47 and any necessary (small entity) charges can be charged to USPTO Deposit Account 200336 of Technology Licensing Co. LLC. Correspondence may be addressed to Customer No. 26830.

The Examiner is especially invited to telephone Applicants' Attorney if that would expedite prosecution and disposal of this Application.

Respectively Submitted,



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Enclosure: RCE Form PTO/SB/30